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CLAIMS

1. A method for the detection of a polypeptide in a cell or tissue sample which sample comprises a nerve cell or a nerve progenitor cell wherein said polypeptide is encoded by a nucleic acid molecule selected from the group consisting of:

a) a polypeptide encoded by a nucleic acid molecule as represented by the sequence shown in Figure 1 or 2;

b) a polypeptide encoded by a nucleic acid molecule which hybridises to the nucleic acid molecule in (a) under stringent hybridisation conditions and is a polypeptide which induces the apoptotic function of p53; or

c) a polypeptide encoded by a nucleic acid molecule which is degenerate to the nucleic acid molecule represented in (a) and (b); said method comprising the steps of;

i) providing a sample comprising a nerve cell or a nerve cell progenitor cell;

ii) contacting said sample with an agent which binds said polypeptide;

iii) detecting the presence of said polypeptide in said cell sample.

2. A method according to Claim 1 wherein said nucleic acid is represented by the nucleic acid sequence in Figure 1 or 2.

3. A method according to Claim 1 or 2 wherein said polypeptide is represented by the amino acid sequence in Figures 3 and 4 wherein said sequence has been modified by addition, deletion or substitution of at least one amino acid residue.

4. A method according to any of Claims 1-3 wherein said agent is an antibody which binds said polypeptide.

5. A method according to Claim 4 wherein said antibody is a polyclonal antibody.

6. A method according to Claim 5 wherein said antibody is a monoclonal antibody.

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7. A method according to any of Claims 4-6 wherein said antibody is provided with means which enable the detection of the antibody bound to said polypeptide.

8. A method according to Claim 7 wherein said detection means is selected from the group consisting of: an enzyme; a isotope label or a fluorescent label.

9. A method according to Claim 1 or 2 wherein said method is the detection of a nucleic acid molecule which encodes said polypeptide.

10. A method according to Claim 9 wherein said agent is a nucleic acid molecule adapted to anneal to said nucleic acid molecule which encodes said polypeptide.

11. A method according to Claim 10 wherein said nucleic acid molecule is at least one oligonucleotide molecule.

12. A method according to Claim 11 wherein said nucleic acid molecule is a pair of oligonucleotide molecules adapted to bind said nucleic acid molecule which is to be detected.

13 A method according to Claim 12 wherein said method is a polymersase chain reaction method.

14. The use of a polypeptide selected from the group consisting of:

i) a polypeptide encoded by a nucleic acid molecule as represented by the sequence shown in Figure 1 or 2;

ii) a polypeptide encoded by a nucleic acid molecule which hybridises under stringent hybridisation conditions to the nucleic acid molecule in (i) and is a polypeptide that induces the apoptotic function of p53; or

i) a polypeptide encoded by a nucleic acid molecule which is degenerate because of the genetic code to the nucleic acid molecule represented in (i) and (ii).

for the manufacture of a medicament for use in the treatment of neurodegenerative diseases which result from abnormal expression of said polypeptide.

15. A method according to Claim 14 wherein said polypeptide is encoded encoded by a nucleic acid molecule.

16. A method according to Claim 14 or 15 wherein said polypeptide is represented by the amino acid sequence in Figures 3 and 4 wherein said sequence has been modified by addition, deletion or substitution of at least one amino acid residue.

17. A method according to Claim 16 wherein said nucleic acid molecule is part of a vector adapted for gene therapy.

18. The use of an antagonist which interacts with a polypeptide selected from the group consisting of:

i) a polypeptide encoded by a nucleic acid molecule as represented by the sequence in Figure 1 or 2;

ii) a polypeptide encoded by a nucleic acid molecule which hybridises under stringent hybridisation conditions to the nucleic acid molecule in (i) and is a polypeptide that induces the apoptotic function of p53; or

iii) a polypeptide encoded by a nucleic acid molecule which is degenerate to the nucleic acid molecule represented in (i) and (ii).

for use in the manufacture of a medicament for use in the treatment of neurodegenerative diseases which result from abnormal expression of said polypeptide.

19. Use according to Claim 18 wherein said polypeptide is represented by the amino acid sequence in Figures 3 and 4 wherein said sequence has been modified by addition, deletion or substitution of at least one amino acid residue.

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20. Use according to Claim 18 or 19 wherein said disease is selected from the group consisting of: Alzheimer's disease; Parkinson's disease; multiple sclerosis; or a retinopathy.

21. Use according to any of Claims 18-20 wherein said antagonist is an antibody or antibody part which binds said polypeptide.

22. Use according to Claim 21 wherein said antibody is a monoclonal antibody or binding part thereof.

23. Use according to Claim 21 or 22 wherein said fragment is a Fab fragment.

24. Use according to Claim 23 wherein said fragment is selected from the group consisting of: $F(ab')_2$, Fab, Fv and Fd fragments; and CDR3 regions.

25. Use according to any of Claims 22-24 wherein said antibody is a humanised.

26. Use according to any of Claims 22-24 wherein said antibody is a chimeric antibody.

27. Use according to Claim 18 wherein said antagonist is a nucleic acid molecule.

28. Use according to Claim 27 wherein said nucleic acid molecule is a transcription cassette comprising a nucleic acid molecule operatively linked to a promoter which promoter transcribes said nucleic acid molecule to produce an antisense nucleic acid molecule, said sequence selected from the group consisting of:

i) a nucleic acid sequence, or part thereof, as represented in Figure 1 or 2;

ii) a nucleic acid sequence which hybridises under stringent hybridisation conditions to the sense sequence presented in

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Figure 1 or 2 and which encodes a polypeptide with anti-apoptotic activity.

29. Use according to Claim 28 wherein said cassette is part of a vector.

30. Use according to Claim 27 wherein said nucleic acid molecule comprises a transcription cassette wherein said a nucleic acid molecule, or part thereof, selected from the group consisting of:

i) a nucleic acid molecule represented by the nucleic acid sequence in Figure 1 or 2;

ii) a nucleic acid molecule which hybridises under stringent hybridisation conditions to the sequences in (i) above and which encodes a polypeptide with anti-apoptotic activity; or

iii) a nucleic acid molecule which is degenerate as a consequence of the genetic code to the sequences defined in (i) and/or (ii) above; wherein said cassette is adapted such that both sense and antisense nucleic acid molecules are transcribed from said cassette.

31. Use according to Claim 30 wherein said cassette is provided with at least two promoters adapted to transcribe both sense and antisense strands of said nucleic acid molecule.

32. Use according to Claim 31 wherein said cassette comprises a nucleic acid molecule wherein said molecule comprises a first part linked to a second part wherein said first and second parts are complementary over at least part of their sequence and further wherein transcription of said nucleic acid molecule produces an RNA molecule which forms a double stranded region by complementary base pairing of said first and second parts.

33. Use according to Claim 32 wherein said first and second parts are linked by at least one nucleotide base.

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34. Use according to Claim 33 wherein said first and second parts are linked by 2, 3, 4, 5, 6, 7, 8, 9 or at least 10 nucleotide bases.

35. Use according to any of Claims 30-34 wherein the length of said RNAi molecule is between 100bp-1000bp.

36. Use according to Claim 35 wherein the length of said RNAi molecule is selected from at least 100bp; 200bp; 300bp; 400bp; 500bp; 600bp; 700bp; 800bp; 900bp; or 1000bp.

37. Use according to any of Claims 30-34 wherein said RNAi is at least 1000bp in length.

38. Use according to any of Claims 30-34 wherein said RNAi molecule is between 15bp and 25bp in length.

39. Use according to Claim 38 wherein said RNAi molecule is 21bp in length.

40. Use according to any of Claims 30-39 wherein said cassette is part of a vector.

41. A method to screen for agents that modulate the activity of a polypeptide which induces the apoptotic function of p53 wherein said polypeptide is selected from the group consisting:

a) a polypeptide encoded by a nucleic acid molecule as represented by the sequence shown in Figure 1 or 2;

b) a polypeptide encoded by a nucleic acid molecule which hybridises under stringent hybridisation conditions to the nucleic acid molecule in (a) and is a polypeptide that induces the apoptotic function of p53; or

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c) a polypeptide encoded by a nucleic acid molecule which is degenerate to the nucleic acid molecule represented in (a) and (b); comprising the steps of;

i) providing a cell sample comprising a nerve cell or nerve progenitor cell;

ii) contacting said sample with an agent to be tested; and

iii) monitoring effect of said agent on the presence and/or activity of said polypeptide.

42. A method according to Claim 41 wherein said agent is an antagonist of said polypeptide.

43. A method according to Claim 41 wherein said agent is an agonist of said polypeptide.